

=> E KAWAKAMI JUN ICHI/AU 25

E1 3 KAWAKAMI JUNI/AU
E2 1- KAWAKAMI JUN/AU
E3 6 --> KAWAKAMI JUN ICHI/AU
E4 1 KAWAKAMI JUNI KA/AU
E5 3 KAWAKAMI JUNI CHI/AU
E6 1 KAWAKAMI JUNI CHIRO/AU
E7 3 KAWAKAMI JUNI I/AU
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Author search

09.30.02

=> S (E2 OR E3 OR E5 OR E6) AND (IMIDAZOL?)

1 "KAWAKAMI JUN"/AU
6 "KAWAKAMI JUN ICHI"/AU
3 "KAWAKAMI JUNI CHI"/AU
1 "KAWAKAMI JUNI CHIRO"/AU
7417: IMIDAZOL?

L15 1 ("KAWAKAMI JUN" AU OR "KAWAKAMI JUN ICHI"/AU OR "KAWAKAMI JUNI CHI"/AU OR "KAWAKAMI JUNI CHIRO"/AU) AND (IMIDAZOL?)

=> d l15 ibib abs hitstr

L15 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2108:0113.6 CAPLUS

DOCUMENT NUMBER: 134:0001

TITLE: Process for the preparation of 4-alkanoylimidazole derivatives and 1-(2-naphthyl)-1-(1H-imidazol-4-yl)alkanol derivatives

INVENTOR(S): Kawakami, Jun-ichi

PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PEXX12

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

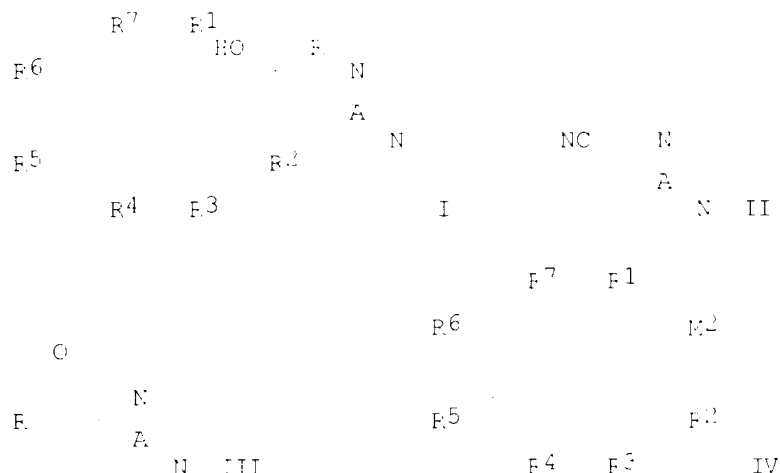
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000078727	A1	2001.12.28	WO 2000-JP4036	20000621

W: AE, AG, AL, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CR, CU, CZ, DM, DZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ,

371 06 PCT

LC, LK, LR, LT, LV, MA, MB, MC, MK, MN, MX, MZ, NO, NE, PL, RO,
 RU, SI, SK, TC, TM, TE, TT, UA, US, UZ, VN, YU, ZA, AM, AZ,
 BY, BG, KZ, MD, RU, TC, TM
 RW: GH, HM, KE, LS, NW, ME, SF, SL, SN, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
 CF, CG, CI, CM, CA, CN, CW, ML, MR, NE, SN, TD, TG
 JP 2001004264 A2 21010413 JP 1000-191081 20000631
 EP 1193258 A1 21020493 EP 1000-940770 20000631
 E: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI, LT, LV, FI, RO
 PRIORITY APELLN. INFO.: JP 1988-175070 A 19890612
 WO 2000-JP4036 W 20000631
 OTHER SOURCE(S): CASREACT 134:56671; MARPAT 134:56671
 GI



AB An industrially advantageous process for the prepn. of compds. of general formula (I) wherein the ring A is an optionally substituted **imidazole** ring; R is an optionally substituted hydrocarbon group or a heterocyclic group; and R1, R2, R3, R4, R5, R6, and R7 are each hydrogen, optionally substituted hydrocarbyl, OH, SH, NH2, acyl, halogeno,

or the like) comprises addn. reaction of 4-cyanoimidazole (II; the ring A is same as above) with F-M1 (R is same as above; M1 = alkali metal, Mg-Y1; Y1 = halo) to give 4-acylimidazole (III; R and ring A are same as above), followed by addn. reaction of III with naphthalene alkali metals (IV; R1 - R7 are = same as above; M2 is alkali metal, Mg-Y2; Y2 is halo). This process is reduced in the no. of steps, attains a high yield, and dispenses with the use of a heavy metal compd. The compds. I exhibit a steroid C17-C20 lyase inhibitory activity (no data). Thus, a soln. of 42.7 g 4-cyanoimidazole in 500 mL THF was added dropwise to a 1.1 M

soln. of isopropylmagnesium bromide in THF (2.4 L) over a period of 30 min, stirred at 15-25 degree., treated dropwise with 10% aq. H2SO4, stirred for 30 min, neutralized to pH 8 with 30% aq. NaOH, and extd. with EtOAc (300 L times. 2) to give 82% 1-(1H-imidazol-4-yl)-2-methyl-1-propanone

(V). 2-Bromo-6-methoxynaphthalene (5.15 g) was added dropwise to a mixt. of 0.55 g and 3 mg iodine in THF at 50.degree. and stirred at 15-25.degree. for 1.5 h, followed by adding dropwise a soln. of 1 g V in THF, and the resulting mixt. was stirred at 15-25.degree. for 8 h to give,

after workup, 84% 1-(1H-imidazol-4-yl)-1-(6-methoxynaphthalen 2-yl)-2-methylpropanol.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS

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ZCAPLUS
NEWS 7 Apr 21 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 21 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 05 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 BIOFILL has been reloaded
NEWS 12 Jul 01 BIOBASE no longer contains STANDARDS file segment
NEWS 13 Jul 01 USAN to be reloaded July 26, 2002;
saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 01 CANCERLIT reload
NEWS 17 Aug 01 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 01 NTIS has been reloaded and enhanced
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 28 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIC has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 27 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985

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SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

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STRUCTURE FILE UPDATES: 30 SEP 2002 HIGHEST RN 457600-76-9

DICTIONARY FILE UPDATES: 30 SEP 2002 HIGHEST RN 457600-76-9

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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

Uploading 10019094 cyano reactant.str

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR

CN

N

N

Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful
FULL SEARCH INITIATED 16:14:34 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 51045 TO ITERATE

100.0% PROCESSED 51045 ITERATIONS
SEARCH TIME: 00.00.02

6589 ANSWERS

L1 6589 SEA SSS FUL L1

=>
Uploading 10019094 elect.str

L2 STRUCTURE UPLOADED

=> d
L3 HAS NO ANSWERS
L3 STR

Ct 3

O

Hy 1

G2

N

H

G1 4

Ak 2

N

H

G1 C,H

G1 [@1],[@2],[@3],[@4]

Structure attributes must be viewed using STN Express query preparation.

=> d
L3 HAS NO ANSWERS
L3 STR

Ch 3

0

Hy 1

G2

N

H

G1 4

Ak 2

N

H

G1 C,H

G2 [01],[02],[03],[04]

Structure attributes must be viewed using STN Express query preparation.

=> s 13 ful

FULL SEARCH INITIATED 16:15:34 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 49400 TO ITERATE

100.0% PROCESSED 49400 ITERATIONS
SEARCH TIME: 00.00.03

4288 ANSWERS

L4 4288 SEA SSS FUL L3

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

280.94

281.15

FILE 'CAPLUS' ENTERED AT 16:15:46 ON 01 OCT 2002

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FILE COVERS 1907 - 1 Oct 2002 VOL 137 ISS 14
FILE LAST UPDATED: 30 Sep 2002 (2002C930/ED)

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substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SPI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> s 14 and 12 ful
2133 L4
1651 L2
L5 143 L4 AND L2

=> s 14/p
L6 1234 L4/P

=> s 16 and 12
1651 L2
L7 113 L6 AND L2

=> s inhibit?
L8 1514516 INHIBIT?

=> s imidazol?
L9 74190 IMIDAZOL?

=> s 19 and 17
L10 80 L9 AND L7

=> s 110 and lyase?
13958 LYASE?
L11 1 L10 AND LYASE?

=> s process?
L12 2844603 PROCESS?

=> s 110 and 112 ful
L13 7 L10 AND L12

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371 of
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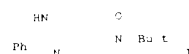
CP4036 2
BR BY, 62, 1

name as
anion followed by addn.
metals
R⁺, R⁻ are same as
before.
The process is reduced in
temp., and dispenses with
condens.
Ext. with a steroid C17-C20
funs.
soln. of 42.7 g 4-cyano.M
to a soln. of 1 M soln. of isopropylm
period of
30 min. stirred at 15-25°C.
HNO₃
stirred for 30 min, neutra
extd. with

$$\begin{array}{c} \text{H} \\ | \\ \text{N} \end{array} \quad \text{CN}$$
$$\begin{array}{cc} \text{H} & \text{O} \\ | & \\ \text{N} & \text{C} \end{array}$$
$$\begin{array}{cc} \text{H} & \text{O} \\ | & \\ \text{N} & \text{C} \end{array}$$
$$\begin{array}{c} \text{H} \\ | \\ \text{N} \end{array} \quad \begin{array}{c} \text{O} \\ | \\ \text{C} \end{array} \text{Et}$$

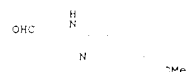
~~RE FORMAT~~

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)
 ACCESSION NUMBER: 123124-96-9P
 DOCUMENT NUMBER: 123124-97-0P
 TITLE: Synthesis, Structure, and Neuroprotective Properties of Novel Imidazolyl Nitrones
 AUTHOR S.: Chakrabarti, Alain; Tibot, Andre; Kaimowitz, Eric; Gaudin, Brian; Lestade, Elise; Goldstein, David
 SPIO: Chemistry Research Division A and Molecular Modeling
 Department, Institut de Recherches Sanitaires
 Sources: Journal of Medicinal Chemistry, 45, 4311, 2002
 JOURNAL: J. Med. Chem.
 DOCUMENT TYPE: American Chemical Society
 LANGUAGE: English

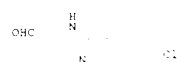


AB A new series of imidazolyl nitrones spin traps has been synthesized and evaluated pharmaco. The salient structural feature of these mol's is the presence of an imidazole moiety substituted by atom of heteroarom. cycles. This connectivity imparts to the nitrones superior neuroprotective properties in vivo and in parallel reduced side effects and toxicity. Thus, I administered i.p. protects 18% mice from lethality induced by an intracerebroventricular administration of tert Bu hydroperoxide (tBHP) an oxidant capable of inducing neurodegenerative processes. Administration of the archetypal nitron phenyl tert-Bu nitron (PBN) at an equimolar dose also affords some protection (6%) in this test. However, this activity is accompanied by hypothermia, whereas no such effect is apparent for I. Moreover, previously prep'd. nonsubstituted or alkyl-substituted imidazolyl nitrones were shown to be extremely toxic to rats in contrast to the compds. prep'd. in this study. The obs'd. activities in vivo correlate well with the calcd. partition coeff. (ClogP) and HOMO energy level.
 IT 34626-11-4P 94938-02-0P 94938-03-1P 97749-71-8P 97749-78-5P 102807-99-8P

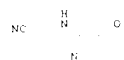
L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



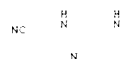
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RN 102907-94-8 CAPLUS
 CN 1H-Imidazole-4-carbonitrile, 2-furanyl (901) (CA INDEX NAME)



RN 123124-96-9 CAPLUS
 CN 12,4'-Bis(1H-imidazole-4-carbonitrile) (901) (CA INDEX NAME)



RN 123124-97-0 CAPLUS
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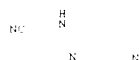
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L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

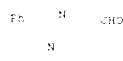
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 279251-05-7P 279251-06-8P, 12,4'-Bis(1H-imidazole-4-carboxaldehyde) 279251-07-9P 279251-08-0P
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 279251-15-9P 279251-16-0P 279251-17-1P
 RD: RCT (Reactant) : SRN (Synthetic preparation) : PREP (Preparation) : RACI (Reaction of reagent)

Reaction of reagent synthesis and neuroprotective properties of imidazolyl nitrones

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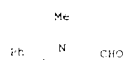


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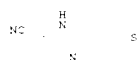
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RN 37749-71-8 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(4-methoxyphenyl) (901) (CA INDEX NAME)

L13 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



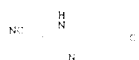
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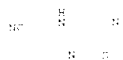
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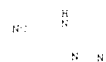
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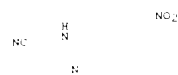
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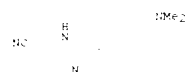
113 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2010 ACS (Continued)
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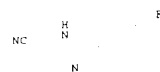
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RN 279251-93-0 CAPLUS
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RN 279251-94-1 CAPLUS
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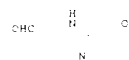
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113 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2010 ACS (Continued)
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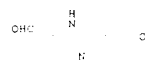
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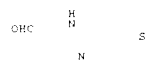
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RN 279251-14-6 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(3-furyl) (9CI) (CA INDEX NAME)



RN 279251-15-7 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(3-thienyl) (9CI) (CA INDEX NAME)



RN 279251-16-8 CAPLUS
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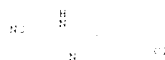
113 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2010 ACS (Continued)



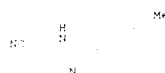
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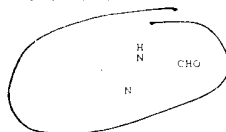
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RN 279251-19-1 CAPLUS
 CN 1H-Imidazole-4-carbonitrile, 2-(4-methylphenyl) (9CI) (CA INDEX NAME)

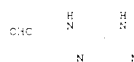


RN 279251-21-3 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(2-naphthalenyl) (9CI) (CA INDEX NAME)

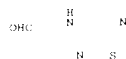


103 derivatives
 of H. vs. CH₃...?
 (@ carbonyl)

113 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2010 ACS (Continued)



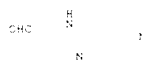
RN 279251-27-9 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(2-thiazolyl) (9CI) (CA INDEX NAME)



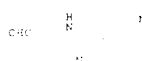
RN 279251-28-0 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(2-pyridyl) (9CI) (CA INDEX NAME)



RN 279251-29-1 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(3-pyridyl) (9CI) (CA INDEX NAME)



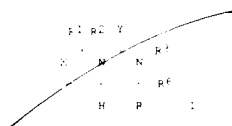
RN 279251-30-4 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(4-pyridyl) (9CI) (CA INDEX NAME)



RN 279251-31-5 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde, 2-(4-nitrophenyl) (9CI) (CA INDEX NAME)

CM	2
CHN	144.62.7
CMF	62.41.94

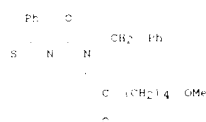
OTHER SOURCE(S): MAPPAT 14:42398
(1)



AB: A procedure for prepn. of the title compd. comprises redn. of
optionally
A) the hydantoin: I) R¹, R² = H, an substituted alkyl,
cycloalkyl,
alkaryl, hetero aryl; R³, O, N, or S; R⁴ R⁵ = an substituted
hetero alkylene; R⁶, O, N, or S; R⁷ R⁸ = H, an substituted
benzyl; I, Y =
O, I) II) R⁹ = O to alko; II) R⁹ = H, R¹⁰ = CH₃, etherification
to ethers
II) R⁹ = H; R¹⁰ = OH; R¹¹ = O, C, alkyl, and reaction of the latter
with a
pyridine silane in the presence of a Lewis acid to give nitriles II
R⁹ = H,
R¹⁰ = cyano; Then, LiBH₄ redn. of (IAB) I) R⁹ = Y = Z; R¹⁰, R¹¹,
R¹² = H,

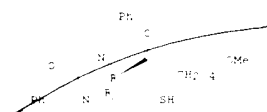
$$\begin{array}{c} \text{CH}_3 \\ | \\ \text{H} \\ | \\ \text{N} \\ | \\ \text{Bu} \end{array}$$

L13 ANSWER 4 OF CARLUS COPYRIGHT 2002 ACS (Continued)
R3 = PhCH2, X = S) gave (7RS,7aR)-1 (P = H, R6 = OH) which was
treated by
1,1-carboxyldiimidazole in MeCN to give (7RS,7aR)-1 (R6 =
imidazolyl-1-carboxyloxy). This was treated by Me2SiCN in CH2Cl2
at -20 degree, in presence of TiCl4 to give (7RS,7aR)-1 (R6 =
cyan).
Prepn. of further D (+) protein intermediates, e.g.,
*3a3, 4S (4S,1,1,1-
dimethyl-4-(4-carboxybutyl)tetrahydropyridine[3,4-d]imidazol
-2(1H)-one was also given.
IT 112938-13-3P 112938-14-4P 112938-15-5P
112938-16-6P 112938-18-8P 112968-29-3P
112968-32-8P
RL: PCT: Parent; SYN: Synthetic preparation; PREP: Preparation
(prepn. and reaction of, in prepn. of thiol intermediate
RN 112938-13-3 CARLUS
CN H4 SH: Imidazol-1-yl, thiolane-1-one,
tetrahydro-2-methyl-2-oxo-1H-imidazol-3-yl
phenyl-2-methyl-2-oxo-1H-imidazol-3-yl
SA INDEX NAME



RN 112928-14 4 CAPLUS
CN 2-Imidazolidinone,
4-(mercaptomethyl)-1-(4-methoxy-1-oxopentyl)-1,3-
bis(phosphorylmethyl)-, 4R trans (CI) CA INDEX NAME:

Absolute stereochemistry



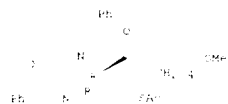
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PN 112938-15-5  CARFEN
CN Ethaneethioic acid, S [(1S,1S)-1-methoxy-1-oxoethyl]-2-oxo-1,3-
bis(phenylmethyl)-4-imidazolidinyl[methyl] ester, (4R,trans)-
(9CI) (CA)
INDEX NAME

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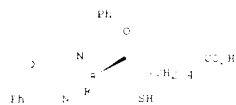
Absolute stereochemistry:

112 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

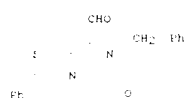


RN 112938-12-4 CAPLUS
CN 4-methoxy-2-phenyl-7-(4-phenyl-1H-imidazol-2-yl)-1H-benzimidazole
CA INDEX NAME
4-methoxy-2-phenyl-7-(4-phenyl-1H-imidazol-2-yl)-1H-benzimidazole

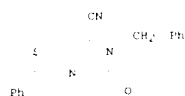
Absolute stereochemistry:



RN 112938-12-4 CAPLUS
CN 1H-3H-imidazo[1,2-b]thiazole-7-tetrahydro-5-oxo-3-phenyl-1-phenylmethyl-1H-imidazole
CA INDEX NAME
1H-3H-imidazo[1,2-b]thiazole-7-tetrahydro-5-oxo-3-phenyl-1-phenylmethyl-1H-imidazole



RN 112938-12-4 CAPLUS
CN 1H-3H-imidazo[1,2-b]thiazole-7-tetrahydro-5-oxo-3-phenyl-1-phenylmethyl-1H-imidazole
CA INDEX NAME
1H-3H-imidazo[1,2-b]thiazole-7-tetrahydro-5-oxo-3-phenyl-1-phenylmethyl-1H-imidazole



112 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1447423541 CAPLUS
DOCUMENT NUMBER: 11293841
TITLE: Process for the preparation of 1-(-)-biotin
INVENTOR(S): Poetsch, Elke; Casutt, Michael
PATENT ASSIGNER(S): Merck Patent G.m.b.H., Fed. Rep. Ger.
SOURCE: U.S., 18 pp. Cont. in part of U.S. 141,161.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4877882	A	1994/03/01	US 1994/03/01	1994/03/01
DE 3613245	A1	1987/11/05	DE 1987/03/10	1988/02/25
DE 3719870	A1	1988/02/25	DE 1988/03/10	1988/03/10
US 4732467	A	1988/02/25	US 1988/03/10	1988/03/10
US 4817460	A	1989/06/06	US 1989/03/10	1989/03/10
US 4917451	A	1990/02/25	US 1990/03/10	1990/03/10
US 5045118	A	1992/02/15	US 1992/03/10	1992/03/10

PRIORITY APPL. INFO.: 1E 1986/03/24 1986/04/25
1E 1988/03/10 1988/03/10
US 1988/03/10 1988/03/10
US 1988/03/10 1988/03/10
US 1988/03/10 1988/03/10
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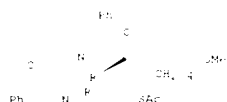
OTHER SOURCE S: MARIAT 1131014

CI:

P1 P2 Y
X N NP3
P4
P5 II S (CH2)4OCH III

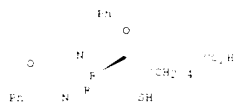
AB The process for prep. the title comp. I is characterized in that the synthesis is carried out via an intermediate II (P1, P2) H substituted alkyl, cycloalkyl, aryl, alkyl, heteroaryl wherein the heteroatom is N, O, S, P, Si, a substituted alkylene, heteroalkylene, P1 is substituted thioether, P4P5 a C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100, C101, C102, C103, C104, C105, C106, C107, C108, C109, C110, C111, C112, C113, C114, C115, C116, C117, C118, C119, C120, C121, C122, C123, C124, C125, C126, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C137, C138, C139, C140, C141, 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L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

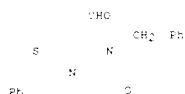


RN 112948-50-6 CAPLUS
CN 4-Imidazo[1,5-b]thiazole-5-carbonitrile
5-methylphenylmethyl-1-phenylmethyl-1H-imidazole-2-carbonitrile (CA INDEX NAME)

Absolute stereochemistry:



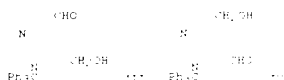
RN 112948-19-9 CAPLUS
CN 1H,3H-Imidazo[1,5-b]thiazole-7-carbonitrile,
tetrahydro-5-oxo-3-phenyl-
(phenylmethyl)- (CA INDEX NAME)



RN 112948-24-3 CAPLUS
CN 1H,3H-Imidazo[1,5-b]thiazole-7-carbonitrile,
tetrahydro-5-oxo-3-phenyl-
(phenylmethyl)- (CA INDEX NAME)

L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:4-6222 CAPLUS
DOCUMENT NUMBER: 476222
TITLE: Synthesis of 4,5-disubstituted imidazoles
AUTHOR(S): Kavadias, Gerry; Loh, Bing; Saintonge, Roger
CORPORATE SOURCE: Bristol Lab., Canada, Candiac, Pl. 15R III, Can.
SOURCE: Can. J. Chem. 1992, 70(6), 121-9
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 93:6222
SI



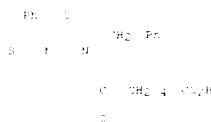
AB Introduction of Ph3C on the N of imidazole 4,5 dicarboxylic acid esters or 4,5 dihydroxymethylimidazole deactivated the functional group adjacent to the protecting group and allowed reactions to take place preferably or exclusively on the other functional group. Thus, di-Me 1-triphenylmethylimidazole 4,5 dicarboxylate (I), on treatment with MeNH2 and MeNH2 produced Me 4-hydroxymethyl-1-triphenylmethylimidazole 5-carboxylate and Me 4-methylamino-carbonyl 1-triphenylmethylimidazole 5-carboxylate, resp. Redn. of I with LiBH4 gave Me 4-hydroxymethyl-1-triphenylmethylimidazole 5-carboxylate. Treatment of 4,5-bis(hydroxymethyl)-1-triphenylmethylimidazole (II) with MeNH2 and with Ac2O afforded 5-hydroxymethyl 4-trimethylammoniumethyl-1-triphenylmethylimidazole and 4-acetoxymethyl 1-hydroxymethyl 1-triphenylmethylimidazole, resp. Oxidn. of II with activated MnO2 produced the monoaldehydes III and IV in a ratio of 10:1. A new mild process for deprotection of N-triphenylmethylimidazoles, compatible with acid sensitive groups in the mol., is reported. The synthesis of several 4,5-disubstituted imidazoles is also described.

IT 82032-50-6P
PL: RCT (Reactant) : SPN (Synthetic preparation) : PREP (Preparation) : prepn. and prepn. of

L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 112948-50-6 CAPLUS
CN 4-Imidazo[1,5-b]thiazole-5-carbonitrile,
tetrahydro-5-oxo-3-phenyl-
(phenylmethyl)- (CA INDEX NAME)



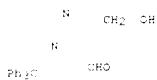
RN 112948-19-9 CAPLUS
CN 1H,3H-Imidazo[1,5-b]thiazole-7-carbonitrile,
tetrahydro-5-oxo-3-phenyl-
(phenylmethyl)- (CA INDEX NAME)



RN 112948-24-3 CAPLUS
CN 1H,3H-Imidazo[1,5-b]thiazole-7-carbonitrile,
tetrahydro-5-oxo-3-phenyl-
(phenylmethyl)- (CA INDEX NAME)

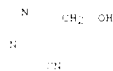
L13 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS (Continued)

RN 82032-50-6 CAPLUS
CN 4-Imidazole-5-carboxaldehyde,
4-(hydroxymethyl)-1-(triphenylmethyl)-
(CA INDEX NAME)



IT 82032-51-7P
PL: RCT (Reactant) : SPN (Synthetic preparation) : PREP (Preparation) : prepn. and deprotection or reaction of, with thionyl chloride
RN 82032-51-9 CAPLUS
CN 4-Imidazole-4-carbonitrile,
5-hydroxymethyl-1-(triphenylmethyl)- (CA INDEX NAME)

CPH3



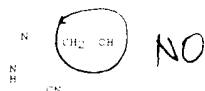
IT 82032-53-9P
PL: RCT (Reactant) : SPN (Synthetic preparation) : PREP (Preparation) : prepn. and substitution reaction of, with aminobethanethiol
RN 82032-53-9 CAPLUS
CN 1H-Imidazole-4-carbonitrile, 5-(chloromethyl)-, monohydrochloride
(CA INDEX NAME)



• HCl

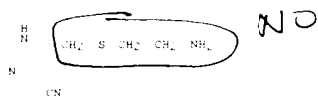
IT 82032-52-8P 82032-54-0P
PL: SPN (Synthetic preparation) : PREP (Preparation) : prepn. of

113 ANSWER 7 OF 7. CAPLUS. COPYRIGHT 2011 A.W. ...
 RN 81 12 12 8 CAPLUS
 CN 1H-Imidazole-4-carbonitrile, 1-(hydroxymethyl)-, monohydrate 1:1
 9011 CA INDEX NAME

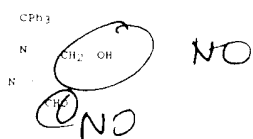


● H71

RN 81 12 14 CAPLUS
 CN 1H-Imidazole-4-carbonitrile, 1-(2-aminoethyl)-, ethyl(methyl)- 9011
 CA INDEX NAME



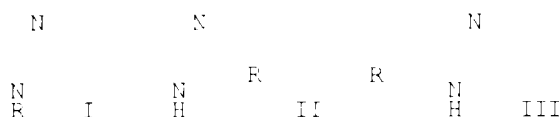
IT 82032-49-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn, reactions of, and NMR of)
 RN 82032-49-3 CAPLUS
 CN 1H-Imidazole-4-carboxaldehyde,
 5-(hydroxymethyl)-1-(triphenylmethyl)-
 9011 CA INDEX NAME



get reference

vs. claim 17 for 10/019094

24 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:106471 CAPLUS
DOCUMENT NUMBER: 36:106471
TITLE: Photochemical reactions. Part 91. Photochemistry of
imidazolides. I. The photo-Fries-type rearrangement
of N-substituted imidazoles
AUTHOR(S): Iwasaki, Shigeo
CORPORATE SOURCE: Org.-Chem. Lab., ETH, Zurich, Switz.
SOURCE: → Helv. Chim. Acta (1976), 59(8), 2733-52
CODEN: HCACAV
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB Imidazoles I (R = Ac, Me(CH₂)₆CO, cyclohexylcarbonyl, Me₃CCO, Bz, Me₂C=CHCO, MeO₂C, Et₂NCO, PhCH₂) underwent photochem. rearrangements to give 3-45% II and 10-35% III. The structures of II and III were confirmed

by spectral data, which are reported.

IT **61985-31-7P**

EL: PREP (Preparation)

(by photochem. rearrangement of 1-acyl analog)

FN 61985-31-7 CAPLUS

CN 1-Propanone, 1-(1H-imidazol-4-yl)-2,2-dimethyl- (9CI) (CA INDEX NAME)

